

a plurality of projections depending from a support at spaced-apart locations defining an array;

a cavity formed at a lower end region of each of said projections, each of said cavities defined by (i) a lower opening, (ii) an upper ceiling region, and (iii) a sidewall extending between said lower opening and said upper ceiling region; and

a/ an attraction source, operable at said projection end regions, effective to draw beads from said supply into said cavities and to releasably retain said beads therein.

2. (Amended) The system of claim 1, wherein at least a lower portion of said sidewall of each projection comprises a resiliently flexible material.

A2 21. (Amended) The system of claim 1, further comprising a conduit assembly having a plurality of conduits for separately channeling a plurality of submillimeter beads released from said cavities to desired locations on a substrate, said conduits having (i) large openings at their upper ends disposed in an array having a center-to-center pitch like that of the projection array such that the large openings are substantially alignable under the projections, and (ii) small openings at their lower ends disposed in an array having a center-to-center pitch like that of the substrate array such that the small openings are substantially aligned thereover.

Please cancel claims 26-47, without prejudice, as being drawn to non-elected invention.

Please add the following new claims:

G3 -- 51. (NEW) The system of claim 21, wherein each of said conduits is curved along a longitudinal direction from said large opening to said small opening.

52. (NEW) The system of claim 21, further comprising a parallelogram linkage assembly supporting said conduit assembly for reciprocal arcuate movement between a raised position and a lowered position.

53. (NEW) The system of claim 52, further comprising:

(i) a carousel adapted for rotation about a central axis, said carousel (a) pivotally supporting said parallelogram linkage assembly for movement radially about a central axis of rotation of the carousel, and (b) having a substrate holding area adjacent to said parallelogram linkage assembly; and

(ii) a stationary rail extending along an inner region of said carousel and having a continuous bearing surface in mechanical communication with said parallelogram linkage assembly, said bearing surface having (a) a region disposed a first distance from central axis and at a first vertical height, whereat said conduit array assumes said lowered position over said substrate holding area, and (b) a region disposed a second distance from said central axis, shorter than said first distance, and at a second vertical height, higher than said first vertical height, whereat said conduit array assumes said raised position.

54. (NEW) The system of claim 21, wherein said substrate is provided with a pair of spaced-apart indexing holes, each being aligned with a respective indexing pin depending from a lower side of said conduit array; whereupon registering said indexing pins in said indexing holes substantially aligns said small-opening array with said well array of said substrate.

55. (NEW) The system of claim 21, further comprising a detection system having a field of view extending into each of said conduits, and adapted to sense the presence or absence of a bead on said substrate under each of said small openings.

56. (NEW) The system of claim 55, wherein said detection system further comprises:
a radiation source adapted to illuminate said substrate at locations below each of said small openings; and
a plurality of elongated light-conductive fibers, each fiber having (i) one end disposed to receive light traveling up through a respective conduit, and (ii) a second end that communicates with a camera device.

57. (NEW) The system of claim 21, further comprising a support structure, wherein said large openings are disposed in an array along one side of said support structure, and said small openings are disposed in an array along an opposite side of said support structure, wherein said large-opening array is arranged with a center-to-center pitch larger than that of said small-opening array, and wherein a region of each conduit extending from a respective one of said small openings is of capillary size, such that a liquid placed in contact with said small-opening array can be drawn at least partially into said conduits by way of capillary action.

58. (NEW) The system of claim 57, wherein said capillary-size region of each conduit has an inner diameter of less than about 1mm.

59. (NEW) The system of claim 57, wherein said capillary-size region of each conduit has inner sidewalls that are hydrophilic.

60. (NEW) The system of claim 1, further comprising a covering system for covering said beads after said beads have been disposed at said desired locations on a substrate, wherein said desired locations comprise an array of wells formed in said substrate, said covering system comprising: